

**WHAT IS CLAIMED IS:**

1. An isolated polynucleotide comprising an APAO encoding a polynucleotide, wherein the APAO encoding polynucleotide comprises a member selected from the group consisting of:
  - a) a polynucleotide encoding a polypeptide as set forth in SEQ ID NO: 51;
  - b) a polynucleotide having at least 90% sequence identity to a polynucleotide set forth in SEQ ID NO: 50;
  - c) a polynucleotide encoding a polypeptide having at least 95% identity to a polypeptide set forth in SEQ ID NO: 51; and
  - d) a polynucleotide as set forth in SEQ ID NO: 50.
2. A recombinant DNA construct comprising a polynucleotide of claim 1 operably linked to a promoter.
3. The recombinant DNA construct of claim 2 wherein the polynucleotide is operably linked to a plant signal sequence.
4. A vector comprising the recombinant DNA construct of claim 2.
5. A host cell comprising the recombinant DNA construct of claim 2.
6. The host cell of claim 5 wherein the host cell is a plant cell.
7. The host cell of claim 6 wherein the plant cell is selected from the group consisting of maize, sorghum, wheat, tomato, soybean, alfalfa, sunflower, canola, cotton, barley, millet, and rice.
8. The host cell of claim 7 wherein the plant cell is regenerated into a plant.
9. A plant comprising the polynucleotide of claim 1.

10. A seed from the plant of claim 9, wherein the seed comprises the isolated polynucleotide.

11. An isolated polypeptide comprising a member selected from the group consisting of:

- a) a polypeptide comprising at least 90% sequence identity to a polypeptide set forth in SEQ ID NO: 51;
- b) a polypeptide encoded by a polynucleotide having at least 90% sequence identity to the polynucleotide set forth in SEQ ID NO: 50; and
- c) a polypeptide as set forth in SEQ ID NO: 51.